

What is claimed is:

1. An isolated purified sphingosine 1-phosphate receptor protein gene having the sequence of SEQ ID NO:4, SEQ ID NO:9, or SEQ ID NO: 13.
2. A purified nucleic acid comprising a sequence of more that 100 base pairs that is, or is complementary to, at least 100 bases of SEQ ID NO:4, SEQ ID NO:9, or SEQ IID NO:13.
3. A genetic construct comprising a sequence of more that 100 base pairs that is, or is complementary to, at least 100 bases of SEQ ID NO:4, SEQ ID NO:9, or SEQ ID NO:13.
4. A purified nucleic acid that hybridizes to a portion of the nucleic acid of SEQ IID NO:4, SEQ ID NO:9, or SEQ ID NO: 13.
5. A purified protein having greater that 85% homology to the amino acid sequence of SEQ.ID NO:3, SEQ.ID NO:7, SEQ.ID NO:8, SEQ.ID NO:10, SEQ.ID NO:11, SEQ.ID NO:12, or SEQ.ID NO:14, or a fragment or an analog thereof.
6. A method for screening for an autoimmune disease, comprising: providing a sample from a patient suspected of having an autoimmune disease; and screening said sample for over-expression of sprr.
7. The method of claim 6, in which said sample comprises RNA and said screening comprises measuring sprr mRNA.
8. The method of claim 6 in which said sample comprises protein and said screening comprises measuring sprr protein.
9. The method of claim 6, in which said disease is LGL or rheumatoid arthritis.
10. A purified protein that is sprr or a fragment or derivative thereof.
11. A method of producing a recombinant sprr protein which comprises introducing a base sequence containing the sprr protein gene of claim 1 into a host to thereby transform said host, cultivating the thus-obtained transformant, and recovering the recombinant sprr protein thus produced.
12. An expression vector which contains a gene as claimed in claim 1.

13. A host cell which is transformed with a vector as claimed in claim 12.
14. The purified nucleic acid of claim 2 wherein said nucleic acid is ribonucleic acid.
15. The purified nucleic acid of claim 14 wherein said ribonucleic acid is mRNA.
16. An antisense nucleic acid molecule complementary to the mRNA of claim 15, or a  
5 fragment thereof.
17. An expression vector comprising the nucleic acid molecule of claim 2.
18. A method for screening for a neurodegenerative disease, comprising: providing a  
sample from a patient suspected of having a neurodegenerative disease; and screening said  
sample for over-expression of sppr.
- 10 19. The method of claim 18, in which said sample comprises RNA and said screening  
comprises measuring sppr mRNA.
20. The method of claim 19 in which said sample comprises protein and said screening  
comprises measuring sppr protein.